Town of Hull Municipal Lighting Plant

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JOHN MACLEOD
OPERATIONS MANAGER

August 15, 2005

Mr. Howard Bernstein
RPS Program Manager
Massachusetts Division of Energy Resources
100 Cambridge Street, Suite 1020
Boston, MA 02114

Re: Notice of Inquiry Regarding Some Proposed Revisions of the Regulations Pertaining to the Definition of "Low Emission, Advanced Biomass Power Conversion Technologies" (the "NOI")

Dear Mr. Bernstein:

The Hull Municipal Lighting Plant ("HMLP") presents its comments to the DOER's NOI.

HMLP is a municipal light plant and is a department of the Town of Hull, Massachusetts. HMLP was established by the Massachusetts legislature in 1894 to generate and sell electricity to the citizens and businesses of the Town of Hull, Massachusetts.

HMLP installed in 2002 on Windmill Point in Hull a 660 KW wind turbine manufactured by Vestas-American Wind Technology, Inc. ("Hull Wind 1"). Hull Wind 1 has operated continuously and has generated 5.5 million kilowatt hours ("kwh") for HMLP. All the electricity is sold by HMLP to its municipal and residential customers in the Town of Hull. The stream of income from the Renewable Energy Credits ("RECs") generated by Hull Wind 1 is a very important part of the positive economics of the Hull Wind 1 project.

HMLP has purchased and will place into operation a second wind turbine, a 1.8 MW unit manufactured by Vestas. Hull Wind 2 will be installed on the closed portion of the Town of Hull landfill (the "Landfill"). Hull Wind 2 is anticipated to generate approximately 4.5 million kwh annually for HMLP. All the electricity will be sold by HMLP to its municipal and residential customers in the Town of Hull. The anticipated stream of income from the RECs generated by Hull Wind 2, based on the current and projected price of RECs, was also very important factor in the underlying economics of HMLP's decision to purchase and install Hull Wind 2.

HMLP is currently in the process of developing a project which will include four additional wind turbines to be placed in the waters off of Nantasket Beach in Harding's Ledge, approximately one mile offshore. HMLP expects that the size of the offshore wind turbines will be in the range of 3.5 megawatts each. HMLP has already initiated the preparatory permitting studies needed to permit the Hull offshore wind project. HMLP has already entered into a purchase agreement to purchase a laser measurement and detection unit which will be placed on Boston Light to collect wind speed data in preparation for the permitting of the project. The anticipated stream of income from the sale of the RECs from HMLP's four offshore turbines based on the current and projected price of RECs is also critical to the underlying economics of HMLP's decision to go forward with HMLP's offshore wind project.

The Town of Hull is also studying the construction of a water desalination facility which will provide drinkable water for the Town. The desalination facility would be partly powered by HMLP's four offshore wind turbines.

As is demonstrated by these activities, HMLP is a leader in the installation and actual use in its municipal utility system of wind power. HMLP makes the following comments in light of its present and future commitment to publicly owned wind power in the town of Hull.

1. **DOER's proposed revisions to its Regulations are in violation of the letter and spirit of the Massachusetts Electric Restructuring Act as well as DOER'S own Regulations.**

The NOI proposed changes to DOER's Regulations[1] would allow various types of biomass fueled power plants to qualify as "new renewable energy generating sources" and thereby be eligible to receive RECs under the Massachusetts Renewable Portfolio Standard program ("RPS") established by the Massachusetts Electric Restructuring Act.

This proposed revision of DOER's regulations would allow biomass fueled power plants placed into commercial operation before December 31, 1997 to qualify for RECs if they met the various requirements of the proposed regulations, including heat rate minimums and emissions limitations. This portion of the proposed regulations would violate the letter and spirit of Massachusetts law.

MGL 25A:11F(a), as enacted into law by the Massachusetts Electric Restructuring Act,[2] established the RPS and required that retail electricity suppliers sell a minimum amount of electricity from " new renewable energy generating sources":

> "Every retail supplier shall provide a minimum percentage of kilowatt-hours sales to end-use customers in the commonwealth from **new** renewable energy generating sources, according to the following schedule: (i) **an additional** 1 percent of sales by December 31, 2003…. For the purposes of this subsection, a new renewable energy generating source is one that begins commercial operation after December 31, 1997, or that represents an increase in generating capacity after December 31, 1997, at an existing facility." [emphasis added]

A "renewable energy generating source" includes:

> "(viii) low emission, advanced biomass power conversion technologies, such as gasification using biomass fuels as wood , agricultural, or food wastes, energy crops, biogas, biodiesel, or organic refuse derived fuel;"

MGL 25A:11F(b)(viii).

This statutory language creates, in effect, two classes: new renewable energy sources and existing energy sources. Had the Legislature intended that existing sources be allowed to substitute for new sources, the words "new" and "an additional" would not have been included. "new" and "an additional" must be read, by the plain meaning ascribed to the words, to require that only new sources be utilized to meet the minimum RPS standard prescribed by the statute. And new renewable energy sources are only those with commercial operation dates after December 31, 1997.

The DOER's existing RPS regulations reflect the statute and similarly require that for a low emission, advanced biomass power unit to qualify as a "New Renewable Generation Unit" the Unit must have a "Commercial Operation Date" after December 31, 1997, 225 CMR 14.05(1)(a)(6), unless such plant qualifies under a "Vintage Waiver."[3]

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[1] 225 CMR 14.00 *et seq.*

[2] Acts of 1997, c. 164 s. 50

[3] A Vintage Waiver allows the portion of a unit which entered commercial operation prior to December 31, 1997 to qualify as new renewable generation unit for the increased generation capacity of the unit installed after December 31, 1997 if it otherwise meets the requirements of 225 CMR 14.05. See 225 CMR 14.05 (b)(2)

HMLP also believes that DOER's proposed regulations which would allow biomass plants with pre-December 31, 1997 commercial operation dates to qualify for RPS and REC eligibility would be inconsistent with legislative intent as well as its own regulatory interpretation of the statute.

A letter to DOER from the Joint Committee on Energy of the Massachusetts Legislature, dated March 6, 2002, states on page 2 states that section 14.05 of the proposed regulation is acceptable. Section 14.05, quoted above, defines a "New Renewable Generation Unit" as having a Commercial Operation Date after December 31, 1997. The same letter on page 3 states that:

> "The Committee also requested that the Division consider clarifying the standard applicable to new biomass units (those having a commercial operation date on or after January 1, 1998)."

DOER's own regulatory interpretation of the statute is also that new renewable energy plants, including biomass fired facilities, had to have a commercial operation date after December 31, 1997. The "Background Document on the Proposed Regulation for the Renewable Energy Portfolio Standard 225 CMR 14.00," issued by DOER, dated October 3, 2001 when discussing which generation units qualify as new and renewable, states on page 3:

> "To qualify as "new" units, the Act specifies that they must commence commercial operation after December of 1997."

Furthermore, the DOER's RPS White paper #5stated that:

> "From a policy perspective, we believe allowing all such [existing biomass] generation to qualify as new would be inconsistent with the intent of the Act and with DOER's Design Principles."

Furthermore, DOER states on Page 5 of the NOI that the statute [4] provides DOER with the authority to qualify "any previously operational biomass facility retrofitted with advanced conversion technologies." The sentence quoted by DOER may allow it to qualify previously operational biomass plants as renewable energy sources, but does not allow DOER also to qualify such pre-1998 plants as *new* renewable energy sources. DOER's suggested interpretation fails to acknowledge that the statute unequivocally distinguishes between **new** renewable sources, which are eligible to meet the schedule set forth in MGL 25A:11F(a) and existing renewable resources, which are not.

Therefore, HMLP believes that extending RPS and REC eligibility to pre-1998 biomass plants is clearly not encompassed by the statute's definition of "low emission, advanced biomass power conversion technologies." Pre-1998 biomass plants are part of the existing pre-1998 baseline of renewable energy sources and it is clear that the statute defined new renewable energy sources to be those which commenced commercial operation or added an increase in generation capacity after December 31, 1997. The point of enacting the statute was to increase the amount of new renewable energy sources over the December 31, 1997 baseline date, and changing the DOER regulation's to include pre-1998 biomass plants as "new" renewable energy sources eviscerates the intent of the statute to increase the amount of new renewable energy generation over that existing on December 31, 1997.

For the foregoing reasons HMLP believes that extending the benefits of qualification for the RPS and RECs to biomass power plants in operation prior to December 31, 1997 is contrary to the plain language and legislative intent of MGL 25A:11F, DOER's RPS Regulations as well as DOER's own interpretation of the statute. Consequently, allowing pre-1998 biomass energy facilities to be treated as "new" and given the same benefits as other new renewable energy facilities would be legally indefensible, bad policy and HMLP urges DOER not to adopt the proposed regulation.

2. **DOER should not remove the exclusion for those plants that utilize pile-burn and stoker grate combustion technologies or plants that burn construction and demolition wood waste.**

[4] MGL 25A:11F(b), second sentence

The statute defines a renewable energy generating source to include **"**low emission, advanced biomass power conversion technologies, such as gasification using biomass fuels as wood , agricultural, or food wastes, energy crops, biogas, biodiesel, or organic refuse derived fuel…" Pile burn and stoker grate combustion technologies are not on this list.

DOER in its "Background Document on the Proposed Regulation for the Renewable Energy Portfolio Standard 225 CMR 14.00," dated October 3, 2001, on page 3 states that:

> "[O]lder biomass burning technologies such as pile burn or stoker combustion are neither advanced nor low emission and are categorically excluded."

DOER's regulation (225 CMR 14.05(1)(a)(6)) reflects this finding:

> "Pile burn, stoker combustion or similar technologies shall not constitute an advanced biomass conversion technology."

The letter to DOER from the Joint Committee on Energy of the Massachusetts Legislature, dated March 6, 2002, states on page 2:

> "… in particular we refer to pile burn and stoker technologies, which have been in use for decades and would not be considered advance under any reasonable definition of the term.
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> …
>
> Therefore, the Committee respectfully requests that the final version of the regulation reads as follows…. *Pile burn, stoker combustion or similar technologies shall not constitute an advanced biomass conversion technology.*" [emphasis in the original]

Furthermore, in the NOI DOER provides no technical or other justification as to why it proposes to remove the categorical exclusion of pile burn and stoker grate technologies, other than to say the terms need "clarification." (NOI p.4)

HMLP believes that such technologies are not "low emission, advanced biomass power conversion technologies" and DOER's proposal to remove the categorical exclusion of pile burn and stoker grate technologies from eligibility for RPS and RECs is inconsistent with the statute, DOER's own regulatory interpretation and is inadvisable public policy in light of the legislative intent.

HMLP also objects to DOER's proposal to allow wood derived from construction and demolition materials ("C&D") to be burned in biomass energy plants that would qualify for the RPS and RECs, conditioned on meeting specified air pollution emission standards. The NOI notes that the use of "C&D wood may include contaminants such as lead, arsenic, and other heavy metals." (NOI at p. 8) The experience with combustion of C&D wood in biomass power plants across the country has been that these plants can emit unacceptably large volumes of emissions of heavy metal pollutants into the air and onto the ground and water in the form of ash. The source of these toxic pollutants is paint, especially lead paint, wood preservatives, plastics, metals, chemicals which are applied to the wood or dumped into the C&D waste stream, and it is very difficult, if not impossible, as well as very expensive, to sort or remove these pollutants from the C&D wood once they get into the waste stream.

Moreover, DOER should realize that allowing C&D wastes to be used by a biomass plant grants such plants an unwarranted competitive advantage over wind and solar facilities: because of the cost of disposing C&D wood, biomass plants which can burn the C&D wastes often receive a "tipping fee" from the disposers of such waste which is a valuable additional stream of revenue, which can not be taken advantage of by wind and similar energy facilities. HMLP does not believe biomass energy facilities using such C&D wood wastes as fuel should be eligible to receive the same RPS and REC financial benefits as a zero emissions wind, solar or tidal energy facility.

3. **DOER's proposed Regulations would provide an unwarranted financial incentive to existing biomass fired power plants, most of which are located outside of Massachusetts, and would provide an unwarranted competitive advantage to out of state pre-1998 biomass plants to the detriment of in-state wind, solar and other renewable energy facilities.**

HMLP believes that the proposed regulations would allow hundreds of megawatts of existing pre-1998 biomass energy plants across New England to qualify as new renewable energy resources and thereby be eligible for the RPS and RECs. This would potentially flood the REC market with hundreds of thousands (and possibly millions) of megawatt hours of RECs annually and lower the value of the RECs generated by wind, solar, tidal and other advanced renewable energy facilities. These plants rely on RECs for their economic viability- without which new wind and solar and other the plants will not be developed and constructed, and the flooding of the REC market would pull the rug from under existing wind and other plants who made investments in renewable energy plants based on the current statutory and regulatory definition of what is a new renewable energy source.

The potential to adversely affect the value of RECs by opening REC qualification up to pre-1998 biomass energy plants is recognized in the NOI:

> "If DOER were to set standards for advanced biomass power plant capacity, the supply of MA RECs in the market would increase. If supply were to move substantially ahead of demand, then the price of MA RECs would decline significantly."

NOI at p. 6.

The RPS White Paper #5 cited above also recognized the same result:

> "In addition, allowing all of the generation from a retrofitted biomass plant to be eligible as new can create a very unstable market for all other renewables."

The DOER's "Background Document on the Proposed Regulation for the Renewable Energy Portfolio Standard 225 CMR 14.00," dated October 3, 2001, on page 7 recognizes there are plentiful renewable energy sources available:

> "After extensive analysis, the Division estimates that the supply of existing renewable sources in New England (about 13 percent of annual supply) will far exceed the amount needed to maintain 1997 levels in Massachusetts through at least 2015 (even while supplying the requirements of RPS programs in other states, such as Maine and Connecticut)."

Ridgewood Renewable Power LLC, in its comments to the DOER on the NOI, dated August 4, 2005, compiled a list of all biomass plants in New England and Canada that could sell power into NEPOOL and qualify for RPS and RECs. Ridgewood stated that if all existing biomass energy facilities were to qualify and come on-line they would supply 76% of the total Massachusetts REC market by 2010. If all newly developed biomass facilities were to come on-line they would supply 119% of the Massachusetts REC market. Ridgewood states that the impact on the REC market would be "devastating."[5]

Moreover, HMLP believes that all of the pre-1998 biomass fired power plants, except one, which might seek to qualify as RPS and REC eligible under the DOER proposed regulations are located outside of Massachusetts near

[5] HMLP also joins with Public Service of New Hampshire in its comments, dated August 4, 2005:

> "As noted in *Platt's Megawatt Daily* [July 8, 2005], "Massachusetts' efforts to revamp renewable portfolio standard rules could thwart wind development and crush New England's fledgling renewable energy certificate (REC) trading market…." Based upon figures on other biomass facilities in the region provided by DOER, at least ten facilities with a capacity of 254 MW could retool and participate in the RPS. These facilities have the potential to flood the regional REC market…. If these facilities retrofit and participate in the REC market, supply could move well ahead of demand and prices for RECs would plummet. This would have the consequence of halting development of new renewable energy generation in the region, undercutting the public policy goal of the RPS." (Comments at page 3)

the forests and mills in New Hampshire, Vermont and Maine which generate the biomass to fuel the plants.[6] None of the benefits from expanding eligibility for RPS and REC to pre-1998 biomass plants will accrue to any such biomass plant in Massachusetts. However, the negative results from flooding the REC market with hundreds of thousands (and possibly millions) of megawatt hours generated by pre-1998 biomass power plants will certainly harm existing and to be developed wind, solar, landfill gas or tidal plants in Massachusetts.[7]

Thus allowing pre-1998 biomass fired plants to become RPS and REC eligible will cause a substantial change in the supply-demand balance of RECs in New England which will devalue the value of existing and future RECs and reduce the needed financial incentives to wind, solar, landfill gas and tidal energy, both existing and to be developed.

Moreover, allowing pre-1998 biomass plants to become REC eligible will place wind, solar and other new renewable plants at a major competitive disadvantage compared to pre-1998 biomass plants. DOER's NOI, at page 6 states:

> "An expectation of such oversupply and price decline would likely deter the investment of capital in new plant construction, both for biomass plants and for generation based on all other renewable resources (wind, solar, landfill methane, anaerobic digestion, etc.). Such a consequence would be counter productive to the goals of new renewable generation expansion and increased fuel diversity."

Furthermore, DOER's NOI at page 14 when discussing a 36 month limit on RPS qualification for pe-1998 biomass plants states that:

> "The proposed limit on their period of RPS qualification is meant to mitigate what may be an unfair competitive advantage over both new biomass plants and new biomass plants and new plants that utilize other renewable resources and technologies."

Thus DOER itself has recognized that pre-1998 biomass plants may have an inherent competitive advantage over new wind and solar plants. This competitive advantage for biomass energy plants can arise from many factors: most, if not all, of these pre-1998 plants have paid off their original debt, and being debt free have lower, or no, debt service costs, which will not be the case with new wind plants. Most of these pre-1998 biomass plants received extremely high rates for selling power to utilities under PURPA and state mandated PURPA rate subsidies, which presently are as high as 15 cents/kwh for some plants in New Hampshire which could potentially qualify under the proposed DOER regulations. Existing plants with paid-for sunk costs may have much lower operating costs than new wind energy facilities. Existing plants also may be the beneficiaries of favorable tax credits or low cost tax exempt bonds or state funded buy-outs of their over market high cost power purchase contracts. HMLP believes that to provide such pre-1998 biomass plants with additional REC benefits which the Massachusetts legislature intended to supply to Massachusetts based wind and solar facilities would provide an unwarranted competitive advantage to pre-1998 biomass plants over wind and other renewable energy facilities.

Therefore, (i) devaluing RECs by opening the door to REC qualification to a large number of pre-1998 biomass plants located outside Massachusetts, causing a decrease in the amount of financial incentive for newly constructed or to-be developed in-state wind, solar, landfill gas and other renewable generation sources and (ii) providing an unwarranted competitive advantage to pre-1998 biomass plants over wind and other renewable energy facilities would be contrary to the legislative intent and, in HMLP's view, bad public policy.[8]

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[6] See list of New England biomass energy plants attached to the comments of Ridgewood Renewable Power LLC.

[7] Also see the comments of Russell Biomass LLC, dated July 25, 2005, stating that allowing retrofit of stoker fired boilers of existing biomass plants could cause REC prices to drop "precipitously" in the 2007-2012 time frame. Russell Biomass also estimates that over 3000 GWhrs per year could be generated by existing biomass energy facilities in New England. See comments at p. 3.

[8] HMLP agrees with many of the comments made by the Union of Concerned Scientist, the Conservation Law Foundation, Beaufort Power LLC, Ridgewood Renewable Power LLC, UPC Wind Management, LLC, Linekin Bay Energy Company, LLC, PSNH and Cape Wind Associates in their submissions to DOER.

4. Conclusion.

HMLP has invested its limited financial resources in causing its municipally owned utility system to be substantially powered by wind energy now and in the future. HMLP's eligibility to receive RECs is a material part of the anticipated cash flow which has allowed to HMLP to purchase and install two utility scale wind energy turbines and is an important part of the financial foundation of HMLP's plans to develop, install and operate four offshore 3.5 MW wind turbines. HMLP has made these substantial financial investments partly in reliance on the structure of the REC market established by DOER's regulations and the resulting projected REC prices. IF DOER's proposed changes to its regulations cause the market to be flooded with RECs generated by pre-1998 biomass energy plants and decrease the value of RECs, the economics of HMLP's offshore wind project will be materially and adversely affected because the value of the RECs, as one significant element of the cash flow for the offshore wind project, will have been significantly impacted. This will cause HMLP's to reevaluate its plans to the install four offshore wind turbines. HMLP believes this is contrary to the intent of the Massachusetts legislature in enacting the RPS and REC program.

HMLP appreciates the ability to provide these comments to DOER, and looks forward to entering into a dialogue with DOER on its NOI.

Very truly yours,

John A. MacLeod

John MacLeod
Operations Manager

Cc: Patrick Canon, Chairman, Hull Municipal Lighting Board
Arnold R. Wallenstein, Esq., Ferriter, Scobbo & Rodophele, PC